METHOD AND APPARATUS FOR CLEANING GENERATOR AND TURBINE COMPONENTS

ABSTRACT OF THE DISCLOSURE

[0027] A method and apparatus for cleaning a generator or turbine component using a laser ablation technique. The method includes programming a controller coupled to a laser source for controlling the laser source to perform laser ablation. A laser beam is directed at a generator or turbine component surface for vaporizing surface contaminants and coatings deposited on the generator or turbine component surface without changing material properties of said generator or turbine component. A computer system having a processor and a database is communicatively coupled to the controller. The database is loaded with turbine or generator component data and corresponding laser power related data for ablating surface contaminants and coatings from respective components. The apparatus also includes a detector disposed adjacent to the turbine or generator component to monitor ablation process and provide feedback data to the computer system, and a comparator for comparing the feedback data with predetermined data to determine progress of ablation. The laser source is controlled to produce a laser beam depending on the comparison step.